

For a greater diversity of bird life, one could not ask for a better place than Grand Manan and the islands in its immediate vicinity. Probably there are no new forms to be discovered here. Nearly all the birds occurring in Northeastern North America have at some time or another been recorded. Nevertheless, Grand Manan has still many opportunities to offer ornithologists desiring to make field studies of particular species. There are birds in abundance and there are the facilities of the Bowdoin Biological Station on Kent's Island—a place we strongly hope will soon become a Barro Colorado or Tortugas of the Northeastern Atlantic coast.

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## NOTES ON THE SUMMER AND FALL BIRDS OF THE WHITE MOUNTAINS, ARIZONA

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Between June 23 and July 24, 1933, a party representing the San Diego Society of Natural History collected birds and mammals in the White Mountains, Apache County, Arizona. The personnel comprised Karl Kenyon, Turlington Harvey III, Samuel G. Harter, and the writer. The writer later returned during his vacation and spent from September 28 to October 5, 1933, in the same locality. Following is a list, with notations, of the birds collected or observed, with a brief description of this interesting region.

The White Mountains are situated near the center of the eastern boundary of Arizona and form the highest part of the eastern end of the great Mogollon Plateau. Our summer camp was situated on the north fork of the White River, at an altitude of 8200 feet, and from this point we radiated on foot in all directions for a distance of three or four miles. On three occasions, by machine and on horse-back, greater distances and higher elevations were reached.

The rushing mountain stream that passed our camp-site—often referred to as "the creek"—ran in an east to west direction and was bordered with birches, alders, and low willows. To the south, Mount Ord and Mount Baldy rose to elevations of over 10,000 feet. During our summer visit, each retained a low bank of winter's snow on the north slope of their crests. A dense forest of spruce clothed these northerly slopes, and where fires had burned through this forest, pure stands of aspen had filled in. To the north of the river, the country was a gentle sloping plateau, chiefly forested with yellow pines. Grassy

prairies, void of trees, occupied parts of this plateau, and occasionally moist glades formed small meadows in the forests. The whole region visible from our camp had never been logged and was indeed a forest primeval, beautiful to see.

The Transition Zone, marked by the yellow pine forests, and the Hudsonian Zone, indicated by the spruces, were sharply defined. In our location, the river formed the boundary of each, and but few were the spots where the pines invaded the spruce territory south of the stream or vice versa.

The whole collecting area was within the Fort Apache Indian Reservation and the wild life had not been destroyed. Hunting for sport by any person except the resident Indians was prohibited. Bears, both black and grizzly, and a few wolves still roamed unmolested; turkeys and grouse were fairly abundant.

In former years sheep had been allowed on the higher elevations, but following the cessation of such grazing the response by nature seemed almost beyond belief. Grass was almost knee high over the more open parts of the Hudsonian Zone, while the forest meadows were waist deep in grass and flowers. A few cattle roamed over the prairies and through the yellow pine forests, but were so limited in numbers that the meadows and grassy parts of this zone were but little affected. The nearest settlement and postoffice was the small lumber-mill town of McNary, about eleven miles away, at an elevation of 7200 feet.

The writer wishes to express his thanks to the Arizona Fish and Game Commission for many courtesies extended; to Mr. William Donner, Superintendent of the Fort Apache Indian Reservation for his kindness in granting our party collecting privileges within the Reservation; to Mr. Hughey, the local game protector, whose knowledge of the region and its wild life proved to be very helpful many times; and to Mr. A. J. van Rossem and Mr. A. C. Bent, who aided in the identification of some of the specimens taken.

PIED-BILLED GREBE. *Podilymbus podiceps podiceps*. A pair of Pied-billed Grebes was seen swimming on the mill-pond at McNary on June 23, and on July 23 probably the same pair was seen with six small young.

TREGANZA'S HERON. *Ardea herodias treganzai*. A single Great Blue Heron was seen several times as it fished along the stream during my stay between September 28 and October 5.

COMMON MALLARD. *Anas platyrhynchos platyrhynchos*. A newly hatched duckling of uncertain identity was brought in by Kenyon on



FIG. 24. A spruce forest, with Mt. Ord in the distance.



FIG. 25. A mountain meadow filled with blooming iris. Yellow pines are in the foreground and background.

June 26. It was found with its mother a mile or more up White River from our camp, at an altitude of about 8300 feet. He tried to raise it but it died on June 28. Subsequently it was forwarded to Mr. A. C. Bent who identified it as a Mallard.

A few days later the local game warden, Mr. Hughey, took us to a place where he had flushed a Mallard from its nest which contained eight eggs. Unfortunately, the nest had been destroyed by some enemy, as only a few scattered egg-shells remained. The nest was under the grass at the roots of a scrub willow near the rushing creek.

**SHARP-SHINNED HAWK.** *Accipiter velox velox*. A molting female was taken on July 11 which upon dissection offered no indication of having nested. The bird was just emerging from immature into adult plumage. Barred breast feathers were replacing streaked, and on the back the new feathers were bluish instead of brownish. From this evidence it might seem that this bird was summering in its birthplace or possibly its future nesting region.

**WESTERN RED-TAILED HAWK.** *Buteo borealis calurus*. A single immature hawk of this species was living along the creek and seen almost daily during my fall visit.

**FERRUGINOUS ROUGH-LEG.** *Buteo regalis*. A pair of these hawks was seen several times in July during our summer visit, and on October 4 the writer saw one perched on a fence-post at very close range.

**GOLDEN EAGLE.** *Aquila chrysaetos canadensis*. A pair of Golden Eagles was seen several times flying over the spruce forest at Bear Flat near Mount Ord. Once, while the writer was on horse-back, one of the pair flew very close over head.

**EASTERN SPARROW HAWK.** *Falco sparverius sparverius*. At least two pairs of Sparrow Hawks had chosen the forests bordering the large open prairies for their summer homes. They were exceptionally wild and only one specimen was obtained.

**DUSKY GROUSE.** *Dendragapus obscurus obscurus*. Dusky Grouse were not uncommon in the summer on the higher wooded ridges, where they were nesting. Three families of half-grown young were found during July by members of our party. They were accompanied by the female parents only; the males were not seen.

**MERRIAM'S TURKEY.** *Meleagris gallopavo merriami*. Turkeys were fairly common and were seen during both the summer and fall visits.

**VIRGINIA RAIL.** *Rallus limicola limicola*. The voices of Virginia Rails, emanating from a large marsh, were heard many times during the latter part of June and early July. However, in many attempts we

failed to secure a specimen, though the presence of the birds was beyond question.

AMERICAN COOT. *Fulica americana americana*. Several pairs of Coots were nesting in the tules that bordered the mill-pond at McNary and were seen each time we passed the place during our summer's stay.

SPOTTED SANDPIPER. *Actitis macularia*. A single individual was seen several times when it was flushed from the creek bank during my fall visit.

WESTERN MOURNING DOVE. *Zenaidura macroura marginella*. A pair of Mourning Doves was seen and heard near our camp on July 5 and 6, and were the only birds of this species recorded during either visit.

WESTERN HORNED OWL. *Bubo virginianus pallescens*. The hooting of Horned Owls was heard almost every night during our stay in June and July, and also during the fall visits. One specimen, an adult male, was secured on June 29.

WESTERN NIGHTHAWK. *Chordeiles minor henryi*. Several times during our stay Nighthawks assembled about sundown in loose flocks to feed high over the yellow pine forest. The only opportunity to obtain a specimen came on July 9 when a female and two downy young were taken on an open grassy prairie.

BROAD-TAILED HUMMINGBIRD. *Selasphorus platycercus platycercus*. This bird was not common and was the only species of hummingbird found by our party in the White Mountains. A nest with one fresh egg was taken on July 19. It was situated on a dead twig of a fir tree, twenty feet above the ground in an open forest.

WESTERN BELTED KINGFISHER. *Megaceryle alcyon caurina*. Two Kingfishers were living along the stream while I was there during the fall.

RED-SHAFTED FLICKER. *Colaptes cafer collaris*. Flickers were found in about equal numbers amidst the pines and spruces and were not uncommon. A young bird that had recently left the nest was taken on July 14.

MEARNS'S WOODPECKER. *Balanosphyra formicivora aculeata*. These birds were seen commonly about McNary, where they were resident in the oak belt.

RED-NAPE SAPSUCKER. *Sphyrapicus varius nuchalis*. Three adult specimens in breeding condition were taken during our summer stay. This species was rather common as a migrant during the fall visit.

NATALIE'S SAPSUCKER. *Sphyrapicus thyroideus nataliae*. This was the commonest member of the woodpecker family and was found most abundantly through the yellow pine forest. Young birds just out of the nest were taken July 4.

WHITE-BREASTED WOODPECKER. *Dryobates villosus leucothorectis*. This form of Hairy Woodpecker was found sparingly through the yellow pine forest. A young male specimen, that had recently left its nest, was collected July 13.

ALPINE THREE-TOED WOODPECKER. *Picoides tridactylus dorsalis*. Of four specimens collected, three were secured in the yellow pines bordering the spruce forest, where no doubt they were foraging. The fourth, taken on July 9, was shot in the dense spruce forest on Snake Creek, a tributary of the White River, at 8500 feet altitude. This bird, a female, was in incubating condition.

WRIGHT'S FLYCATCHER. *Empidonax wrighti*. On July 22, Harter collected a female of this species and four partly-feathered young. The latter he took from their nest, which was situated five feet above the ground in a slender willow tree near a stream. On July 20, he had collected the male from the near vicinity. This was the only time this bird was found by our party.

WESTERN FLYCATCHER. *Empidonax difficilis difficilis*. This species was fairly common during our summer stay. Several nests were collected and several found with young. In every case they were situated in a niche of a vertical rock wall or creek bank and on the shady, northerly side.

WESTERN WOOD PEWEE. *Myiochanes richardsoni richardsoni*. This was the most common flycatcher found in the region. Their greatest abundance was in the yellow pines near the water courses and open glades.

OLIVE-SIDED FLYCATCHER. *Nuttallornis mesoleucus*. These large flycatchers were nesting commonly in the yellow pines, their lusty calls of "It's me' here" being heard almost every quiet morning during the first part of our stay. The habit of these birds of building their nests high up in the trees and perching on the very tip tops of the tallest pines was responsible for their being more often heard than seen.

MONTEZUMA HORNED LARK. *Otocoris alpestris occidentalis*. Horned Larks were abundant on the large open grassy prairies. Young on the wing and a set of three fresh eggs were taken on July 9.

VIOLET-GREEN SWALLOW. *Tachycineta thalassina lepida*. This swallow was fairly common in the yellow pine forests and small colo-

nies were to be found nesting in dead stubs, where they were conveniently situated near marshes or meadows that offered good feeding grounds.

PURPLE MARTIN. *Progne subis subis*. A colony of five or six pairs was nesting in two dead pine trees at an elevation of about 8600 feet in the Hudsonian Zone and another small colony was found on the outskirts of the town of McNary.

ROCKY MOUNTAIN JAY. *Perisoreus canadensis capitalis*. These shy birds were not common. Of five specimens taken four were found in the yellow pines, almost at the point of contact with the spruce forest. The fifth, a male, was taken on July 17 at Bear Flat (altitude 9000 feet) in a dense spruce forest. This bird was carrying a beak-full of insects when shot.

LONG-CRESTED JAY. *Cyanocitta stelleri diademata*. This noisy jay was common. A short-tailed youngster, just out of the nest, was taken on July 8.

WESTERN CROW. *Corvus brachyrhynchos hesperis*. A flock of several hundred crows had assembled for the summer on a large high prairie, two miles east of our camp, at about 8500 feet elevation. One specimen was secured on July 9.

CLARK'S NUTCRACKER. *Nucifraga columbiana*. On July 21, Harter shot a pair of these birds in the pines near camp. They were the only nutcrackers seen by our party, but the species was said to be irregularly common by the resident game warden.

MOUNTAIN CHICKADEE. *Penthestes gambeli gambeli*. Chickadees were most often found along the water courses, where they were feeding in the birches. An incubating female was collected on July 3 and a young bird in full feather on July 19.

ROCKY MOUNTAIN NUTHATCH. *Sitta carolinensis nelsoni*. This larger nuthatch was found twice, a single specimen being collected on July 22, and another one seen the day following. The bird collected was in very worn plumage and had no doubt ascended from the oak belt found at lower altitudes on the White Mountains.

BLACK-EARED NUTHATCH. *Sitta pygmaea melanotis*. These diminutive nuthatches were common in the yellow pines and family bands were found many times feeding high in the tall trees. A young bird that had but recently left the nest was taken on July 14.

RED-BREASTED NUTHATCH. *Sitta canadensis*. This species was not found during the summer visit, though more work in the spruce for-

ests would probably have determined its presence. However, two specimens were taken in the fall, one on September 29 and the other on October 1.

ROCKY MOUNTAIN CREEPER. *Certhia familiaris montana*. Creepers were not uncommon through the yellow pine forests and were probably more abundant than the four specimens taken would indicate.

DIPPER. *Cinclus mexicanus unicolor*. Water Ouzels were found along the larger streams. The only specimen obtained was a young bird taken on July 4. On July 9, the writer found a nest containing four small young. When the nest was approached, a parent bird was flushed and, uttering its alarm note, was soon joined by the mate. Both birds were unusually tame and soothed constantly while I was near the nest.

WESTERN HOUSE WREN. *Troglodytes aedon parkmani*. House Wrens were fairly common along the contact between the yellow pine association and the spruce. A young bird that had recently left its nest was collected on July 22. House Wrens were still to be found among the birches near the creeks during the last days of September and the first of October.

COMMON ROCK WREN. *Salpinctes obsoletus obsoletus*. Rock Wrens were not common as the region was not suited to their needs. An occasional bird was seen near Snake Creek, where there were several rock-bound canyons.

WESTERN ROBIN. *Turdus migratorius propinquus*. Robins were breeding commonly along the water courses. Young out of the nests were seen and one collected on July 1. A set of four heavily incubated eggs was collected on July 22. During my fall visit but a single specimen was seen and collected on September 28. At this time the entire Robin population had left for other localities nor were they seen at McNary, at an altitude of 7200 feet, during two visits to the town.

AUDUBON'S HERMIT THRUSH. *Hylocichla guttata auduboni*. Hermit Thrushes were found sparingly along the water courses. A nest containing four eggs was found on June 24. It was situated six feet above the ground in a small spruce tree near the creek. The incubating bird was shot and upon dissection proved to be the male of the pair. Another set of four very heavily incubated eggs was taken on July 24.

MOUNTAIN BLUEBIRD. *Sialia currucoides*. Mountain Bluebirds were found about the pine-bordered prairies. They were not abundant





FIG. 26. Nest and eggs of the Red-backed Junco.



FIG. 27. Nest and eggs of the Lincoln's Sparrow.

and, as elsewhere over their range, lived in open, dry, high transition localities.

TOWNSEND'S SOLITAIRE. *Myadestes townsendi*. Solitaires were fairly common. Three pairs were found July 1 with young on the wing. Their old nests were located nearby, situated in niches of low perpendicular cliffs that bordered a small stream. Both wood rats (*Neotoma*) and chipmunks (*Eutamias*) were common about these rocky cliffs, and apparently the smooth surfaces of these sheer walls prevented the mammals from molesting the nests.

WESTERN GOLDEN-CROWNED KINGLET. *Regulus satrapa olivaceus*. Three specimens, two adult and one young, were taken on July 17, at an altitude of 9000 feet, in the spruce forest bordering the beautiful mountain park called Bear Flat, thus adding another record of this bird as a breeding species in Arizona.

EASTERN RUBY-CROWNED KINGLET. *Corthylio calendula calendula*. These diminutive birds were found where the forests mixed and at a lower elevation. They were not rare and several families of young out of the nest were seen during July. At this time the almost incessant nuptial songs of the males had ceased and their presence was not as obvious as it would have been earlier in the season.

PLUMBEOUS VIREO. *Vireo solitarius plumbeus*. An immature female of this race was taken at McNary on October 3.

CASSIN'S VIREO. *Vireo solitarius cassinii*. A male specimen of this race was taken at the north fork of White River, 8400 feet altitude, during migration on September 29.

WESTERN WARBLING VIREO. *Vireo gilvus swainsoni*. It was with some surprise that the scarcity of this usually common bird was noted. In the writer's experience, aspen groves in the proximity of meadows and streams always harbor a goodly population of this species, but two adults and one young secured during July were the only specimens heard or taken. The adults were in breeding condition and the young one was not long out of the nest.

VIRGINIA'S WARBLER. *Vermivora virginiae*. This rather quiet, diminutive bird may have been more common than the specimens collected would indicate. Two immature birds, one taken on July 2 and the other on July 17, proved the species to be nesting in this locality. Their choice of tall yellow pines as a feeding ground was no doubt the reason for their apparent scarcity.

BLACK-FRONTED WARBLER. *Dendroica auduboni nigrifrons*. Comparison of the good series of breeding birds which we secured in the

White Mountains with Pacific Coast birds, and also with birds taken in the mountains of southern Arizona reveals the fact that the name *nigrifrons* should be applied to all breeding *D. auduboni* of Arizona.

MACGILLIVRAY'S WARBLER. *Oporornis tolmiei*. A few pairs of this species were found during our summer stay in a small area of dense scrub willows and birches growing near the creek. The three adult birds collected were all in breeding condition.

LILIAN'S MEADOWLARK. *Sturnella magna lilianae*.\* A few pairs of Meadowlarks were nesting on the large prairies. A single male specimen in breeding condition was collected July 9.

NEVADA RED-WINGED BLACKBIRD. *Agelaius phoeniceus nevadensis*. Two small colonies of red-wings were found. One colony was nesting in the tules growing in a mill-pond at McNary, and a smaller colony was nesting in the tall grass of a boggy meadow near our camp. By the latter part of July the young had taken wing and the whole population had left the region.

BREWER'S BLACKBIRD. *Euphagus cyanocephalus*. A small group of blackbirds lived about the village of McNary and another was seen and two immature specimens collected July 9 on the prairie near Snake Creek.

WESTERN Tanager. *Piranga ludoviciana*. The three-note call of the Western Tanager was not uncommon and the species was well distributed over the whole area explored.

WESTERN EVENING GROSBEAK. *Hesperiphona vespertina brooksi*. Two Evening Grosbeaks collected by Harter on the same day, July 21, proved to represent two races. When dissected neither bird was found to be in breeding condition. As both were in the midst of molting, it would indicate that their nesting period had passed and that they were migrating in search of a better food supply.

MEXICAN EVENING GROSBEAK. *Hesperiphona vespertina montana*. As recorded under the preceding form, a single specimen of this subspecies was taken on July 21.

NORTHERN PINE SISKIN. *Spinus pinus pinus*. During the summer, siskins were found where the pines bordered dry grassy flats. At the time of the fall visit, they had assembled in large flocks and were found feeding in weed patches by the roadside.

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\*Proposed by H. C. Oberholser (Sci. Pub. Cleveland Mus. Nat. Hist., I, No. 4, p. 103, December, 1930) with a range of: Central western Texas and south-western New Mexico, west to central and southern Arizona, south into Sonora and Chihuahua.

MEXICAN CROSSBILL. *Loxia curvirostra stricklandi*. These birds were heard more often than seen, as their peculiar, sharp, chattering notes attracted our attention during the latter part of our summer stay. No evidence of breeding was shown in the three specimens collected.

GREEN-TAILED TOWHEE. *Oberholseria chlorura*. Green-tailed Towhees were not common and the first one of four specimens taken was caught in a mouse trap set amidst the rather dense shrubbery bordering White River. This bird, a female, showed unmistakable signs of incubating, though a search failed to reveal the nest. Later, on July 19, a member of our party found a nest containing two eggs. This nest was left undisturbed for the bird to complete the set, but was destroyed by a severe hail storm the next day. I believe that hitherto there has been no actual record of a nest of this species in Arizona, though it has been recognized as a summer resident.

WESTERN VESPER SPARROW. *Pooecetes gramineus confinis*. Vesper Sparrows were abundant on all the larger grass-covered prairies. Young birds just out of the nest were seen on July 16.

RED-BACKED JUNCO. *Junco phaeonotus dorsalis*. This bird was fairly common, mainly along the stream courses. The greatest abundance was in the yellow pine area, though they were to be found scattered along the streams some distance into the fir-spruce forests. Nesting dates were irregular, as young on the wing were taken July 8 and a set of four eggs was taken July 19. This nest was found in the course of construction on July 7 and was situated on the ground under a tussock of grass near a small stream.

WESTERN CHIPPING SPARROW. *Spizella passerina arizonae*. Chipping Sparrows were more abundant at lower elevations, where open pine forests and grassy glades occurred. Only one bird was taken at our White River camp, a male, in breeding condition, on June 23.

GAMBEL'S SPARROW. *Zonotrichia leucophrys gambeli*. A specimen was taken from a small migrating flock on October 1.

LINCOLN'S SPARROW. *Melospiza lincolni lincolni*. These birds were fairly common and were found on nearly every wet meadow in the Hudsonian Zone that we explored. Young birds just out of the nest were taken on July 6 and a set of four fresh eggs was found on July 23.

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